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Understanding Member Shopping Patterns for the Fresh Foods Dept.

GOAL:

Improve member satisfaction, increase sales, and enhance marketing.

KEY TASKS:

- Display data quickly to leaders
- Explore data visually
- Forecast sales trends
- Find correlation and associations between items
- Recommend similar products

TECHNOLOGIES UTILIZED



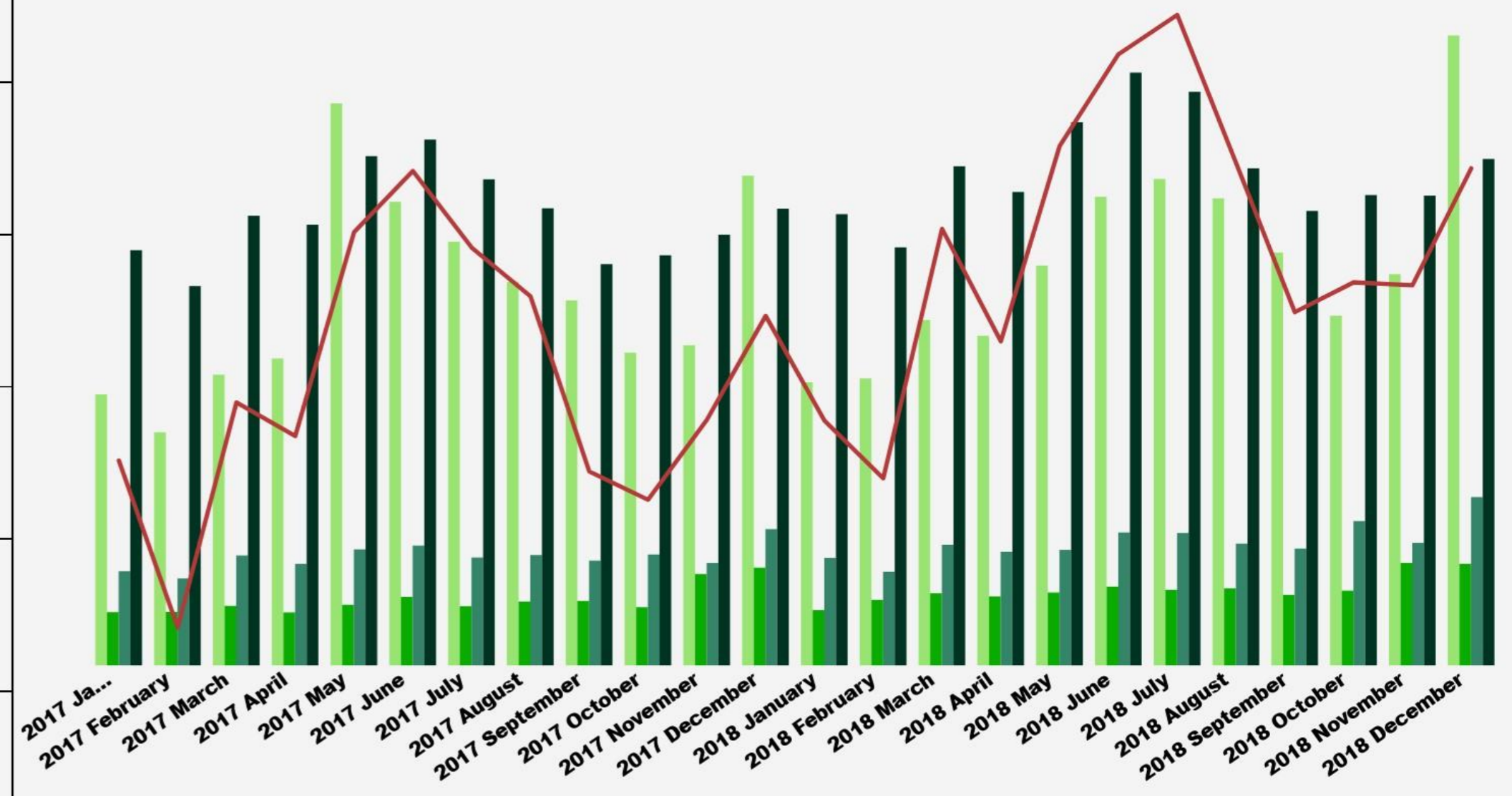
COSTCO SALES DASHBOARD

Reporting Days	716
Revenue	\$50.76M
Units Sold	6M
Unique Members	30K
Warehouses	48
Transactions	2M

1/1/2017 12/31/2018

DEPT: Multiple selec... DESCRIPTION: All STORE: All TYPE: E N

FRESH FOOD REVENUE AND VOLUME BY MONTH



A **Descriptive Analysis** was done using PowerBI which provided the team with insights on the current state of the business.

Item	Count of Receipts	Number of Units
2 LB STRAWBERRIES	809	1,170
BLUEBERRIES	542	672
BANANAS	473	509
ROTISSERIE CHICKEN	167	509
LARGE KIWIF	282	479
RED SEEDLESS GRAPE	396	454
RASPBERRIES 12OZ CL...	360	395
GREEN SEEDLESS GRAP...	342	392
ORGANIC LG EGGS A...	264	388
GOLDEN PINEAPPLE	322	380
ORGANIC BANANAS 3 L...	125	376
WHOLE MILK 2/1 GA...		

MARKET BASKET ANALYSIS USING:

- Correlation
- Associative Rule Mining
- Item-Based Collaborative Filtering

MILK, EGGS, CEREAL, BREAD



MILK, BACON, EGGS



Diagnostic Analytics were used to conduct a market basket analysis to display which items were correlated with each other by receipt count.

Product Recommender

Select Items and Complete Transaction for Suggestions

Item #1: ORANGE 13 LB BOX

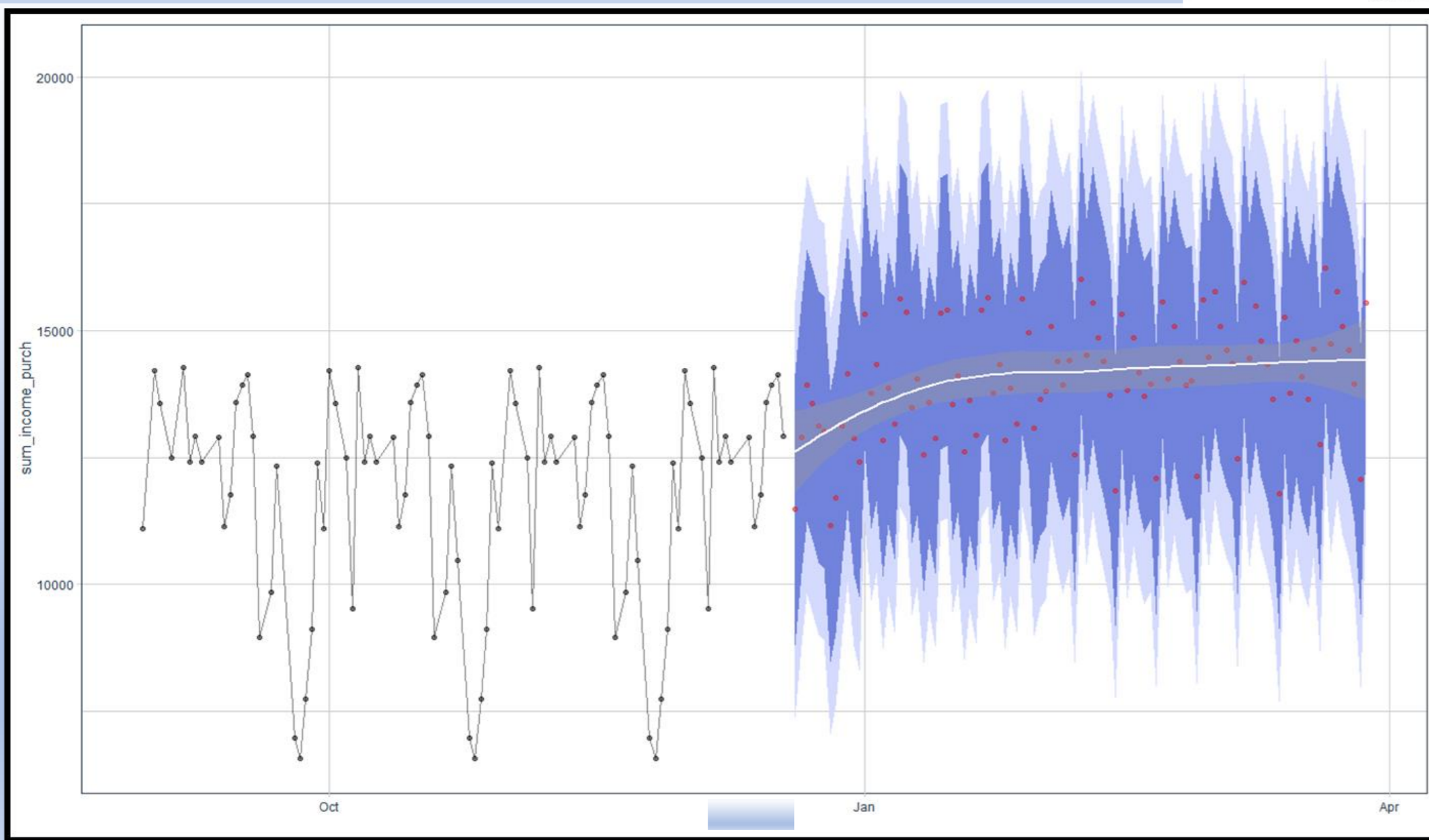
Item #2: ORGANIC BUTTERNUT NA

Item #3: BUTTER CROISSANTS NA

Complete Your Purchase

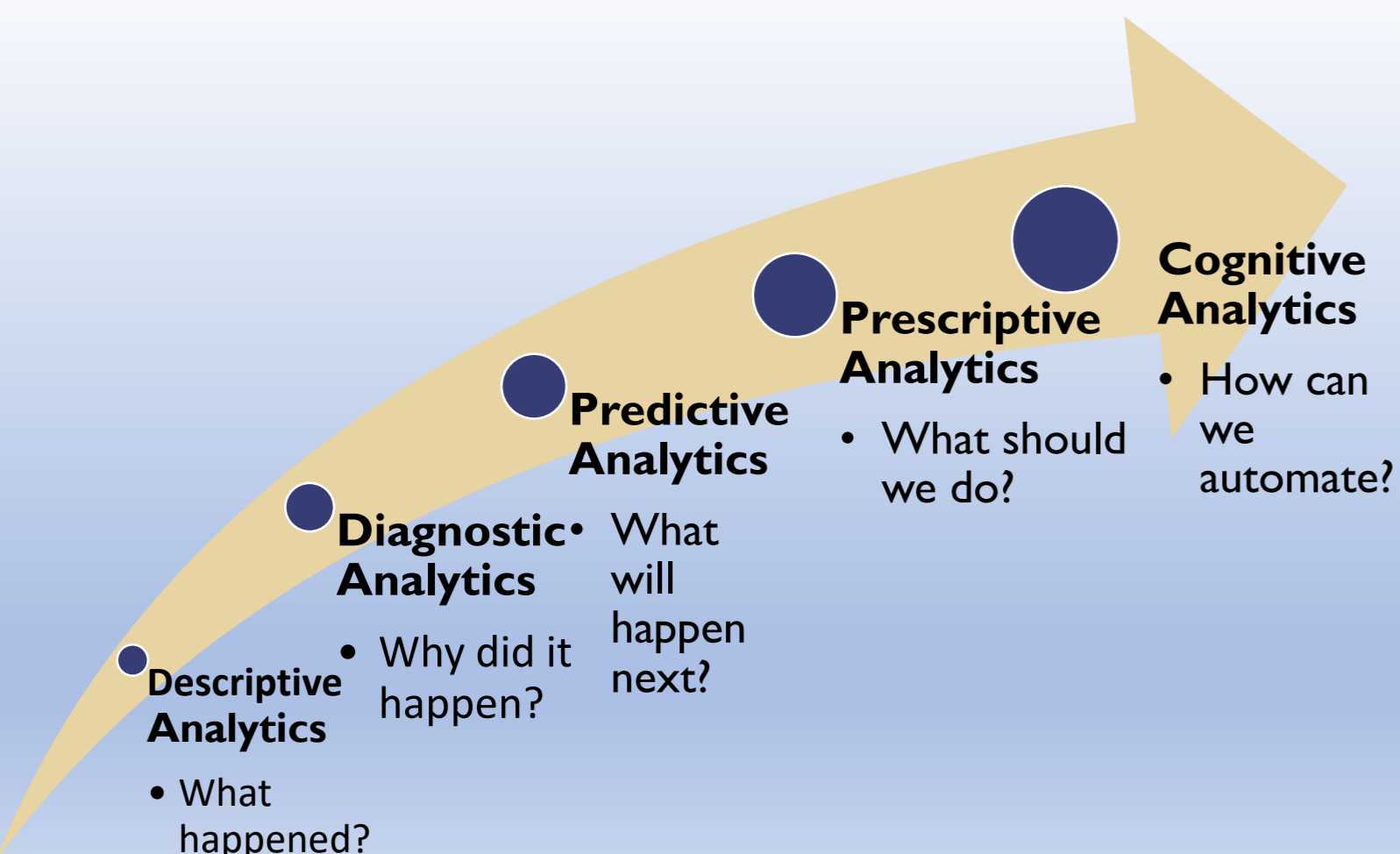
Other Items you Might Be Interested in

- NOTE that not all combinations of products return suggestions
- LEMONS 5 LB BAG
 - MANGOS NA



Predictive Analytics were used to explore Sales trends in the Fresh Foods department. Combined with the Item forecast tool developed in Tableau, these tools can also be used to accurately inform inventory planning.

For our **Prescriptive Analytics** solution, a product recommender tool was developed that will suggest other items of interest to users in real-time as items are placed in their baskets.



RECOMMENDATIONS

- Consider Bundle or Promote Pairings
- Optimize Placement and Increase Sales Lift
- Create Insights For Key Decision Makers
- Use Item Based Collaborative Filtering